

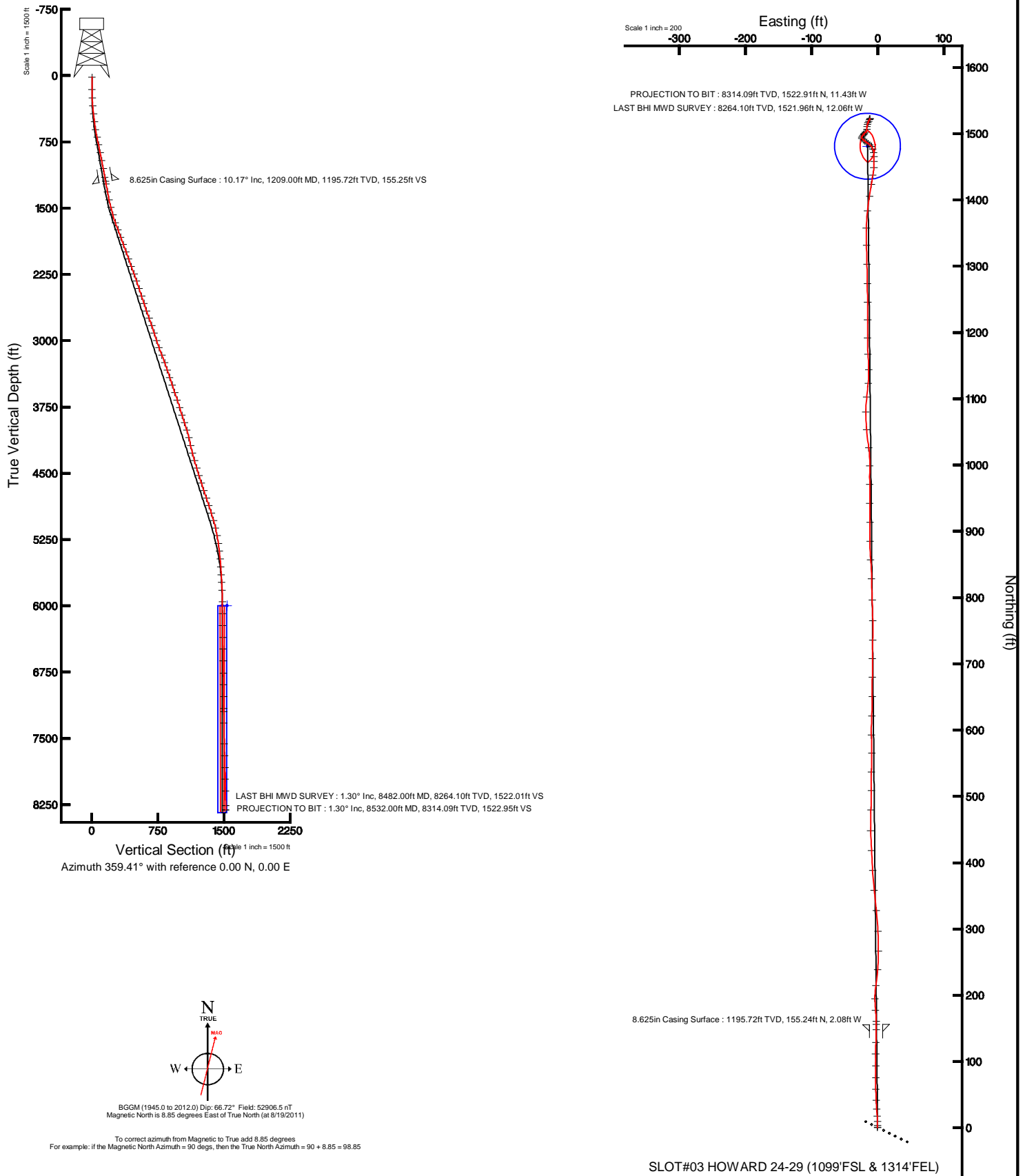


KERR MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#03 HOWARD 24-29 (1099'FSL & 1314'FEL)
Field: WELD COUNTY (KERR MCGEE) Well: HOWARD 24-29
Facility: SEC:29-T1N-R67W Wellbore: HOWARD 24-29 PWB



| | |
|--|--|
| Plot reference wellbore is HOWARD 24-29 (REV-A.0) PWB | Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet |
| True vertical depths are referenced to XTREME 15 (R08) | North Reference: True north |
| Measured depths are referenced to XTREME 15 (R08) | Scale: True distance |
| XTREME 15 (R08) to Mean Sea Level: 5038 feet | Depths are in feet |
| Mean Sea Level to Mud line (At Slot: SLOT#03 HOWARD 24-29 (1099'FSL & 1314'FEL)): 0 feet | Created by: ddbudness on 10/28/2011 |
| Coordinates are in feet referenced to Slot | |





Actual Wellpath Report

HOWARD 24-29 AWP

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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | KERR MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#03 HOWARD 24-29 (1099'FSL & 1314'FEL) |
| Area | COLORADO | Well | HOWARD 24-29 |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | HOWARD 24-29 AWB |
| Facility | SEC.29-T1N-R67W | | |

| REPORT SETUP INFORMATION | | | |
|--------------------------|---|----------------------|--------------------------------|
| Projection System | NAD83 / Lambert Colorado SP, Northern Zone (501), US feet | Software System | WellArchitect® 3.0.0 |
| North Reference | True | User | Doddanna |
| Scale | 0.999965 | Report Generated | 10/28/2011 at 7:10:55 PM |
| Convergence at slot | 0.38° East | Database/Source file | WA_Denver/HOWARD_24-29_AWB.xml |

| WELLPATH LOCATION | | | | | | |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
| | Local coordinates | | Grid coordinates | | Geographic coordinates | |
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | -8.80 | 18.13 | 3165364.08 | 1249900.05 | 40°01'04.264"N | 104°54'34.484"W |
| Facility Reference Pt | | | 3165345.89 | 1249908.73 | 40°01'04.351"N | 104°54'34.717"W |
| Field Reference Pt | | | 3197771.84 | 1268891.29 | 40°04'09.600"N | 104°47'36.000"W |

| WELLPATH DATUM | | | |
|--------------------------|-------------------|--|-------------------|
| Calculation method | Minimum curvature | XTREME 15 (RKB) to Facility Vertical Datum | 5038.00ft |
| Horizontal Reference Pt | Slot | XTREME 15 (RKB) to Mean Sea Level | 5038.00ft |
| Vertical Reference Pt | XTREME 15 (RKB) | XTREME 15 (RKB) to Mud Line at Slot (SLOT#03 HOWARD 24-29 (1099'FSL & 1314'FEL)) | 5038.00ft |
| MD Reference Pt | XTREME 15 (RKB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 359.41° |



Actual Wellpath Report

HOWARD 24-29 AWP

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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | KERR MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#03 HOWARD 24-29 (1099'FSL & 1314'FEL) |
| Area | COLORADO | Well | HOWARD 24-29 |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | HOWARD 24-29 AWB |
| Facility | SEC.29-T1N-R67W | | |

| WELLPATH DATA (88 stations) † = interpolated/extrapolated station | | | | | | | | |
|---|-----------------|-------------|----------|----------------|------------|-----------|---------------|----------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
| 0.00† | 0.000 | 353.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 15.00 | 0.000 | 353.000 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 155.00 | 0.400 | 353.000 | 155.00 | 0.49 | 0.49 | -0.06 | 0.29 | |
| 248.00 | 2.600 | 0.800 | 247.96 | 2.92 | 2.92 | -0.07 | 2.37 | |
| 340.00 | 4.700 | 358.300 | 339.77 | 8.77 | 8.77 | -0.15 | 2.29 | |
| 431.00 | 6.100 | 355.800 | 430.36 | 17.33 | 17.32 | -0.62 | 1.56 | |
| 521.00 | 7.300 | 355.100 | 519.75 | 27.80 | 27.79 | -1.46 | 1.34 | |
| 610.00 | 9.800 | 357.600 | 607.75 | 41.01 | 40.99 | -2.26 | 2.84 | |
| 699.00 | 11.500 | 359.000 | 695.22 | 57.45 | 57.43 | -2.73 | 1.93 | |
| 786.00 | 11.600 | 0.400 | 780.45 | 74.87 | 74.85 | -2.82 | 0.34 | |
| 877.00 | 11.400 | 358.700 | 869.63 | 93.01 | 92.99 | -2.96 | 0.43 | |
| 968.00 | 11.200 | 1.100 | 958.86 | 110.84 | 110.81 | -2.99 | 0.56 | |
| 1059.00 | 11.100 | 1.800 | 1048.15 | 128.43 | 128.41 | -2.55 | 0.18 | |
| 1163.00 | 9.800 | 0.800 | 1150.42 | 147.28 | 147.26 | -2.11 | 1.26 | |
| 1237.00 | 10.400 | 359.000 | 1223.27 | 160.25 | 160.24 | -2.14 | 0.92 | |
| 1327.00 | 10.800 | 354.400 | 1311.74 | 176.78 | 176.75 | -3.10 | 1.04 | |
| 1418.00 | 11.600 | 359.400 | 1401.01 | 194.42 | 194.39 | -4.03 | 1.38 | |
| 1507.00 | 14.200 | 8.100 | 1487.76 | 214.16 | 214.15 | -2.59 | 3.64 | |
| 1598.00 | 16.700 | 4.600 | 1575.47 | 238.22 | 238.24 | 0.04 | 2.93 | |
| 1688.00 | 19.300 | 0.100 | 1661.06 | 265.98 | 266.00 | 1.10 | 3.27 | |
| 1775.00 | 20.800 | 357.600 | 1742.79 | 295.80 | 295.82 | 0.48 | 1.99 | |
| 1864.00 | 20.600 | 354.400 | 1826.04 | 327.19 | 327.19 | -1.71 | 1.29 | |
| 1952.00 | 20.400 | 353.000 | 1908.47 | 357.85 | 357.82 | -5.09 | 0.60 | |
| 2040.00 | 20.000 | 357.600 | 1991.06 | 388.14 | 388.08 | -7.59 | 1.86 | |
| 2128.00 | 19.500 | 356.900 | 2073.89 | 417.85 | 417.78 | -9.02 | 0.63 | |
| 2218.00 | 20.100 | 358.000 | 2158.57 | 448.32 | 448.24 | -10.37 | 0.78 | |
| 2307.00 | 20.700 | 3.200 | 2241.99 | 479.31 | 479.23 | -10.02 | 2.14 | |
| 2394.00 | 18.500 | 358.300 | 2323.95 | 508.45 | 508.38 | -9.58 | 3.15 | |
| 2484.00 | 18.500 | 2.500 | 2409.30 | 536.99 | 536.92 | -9.38 | 1.48 | |
| 2574.00 | 17.800 | 359.000 | 2494.83 | 565.00 | 564.94 | -8.99 | 1.44 | |
| 2661.00 | 19.100 | 359.400 | 2577.35 | 592.54 | 592.47 | -9.37 | 1.50 | |
| 2750.00 | 18.900 | 2.900 | 2661.51 | 621.49 | 621.43 | -8.80 | 1.30 | |
| 2838.00 | 19.900 | 359.700 | 2744.51 | 650.69 | 650.64 | -8.16 | 1.66 | |
| 2926.00 | 19.100 | 1.100 | 2827.46 | 680.06 | 680.01 | -7.96 | 1.05 | |
| 3014.00 | 17.800 | 359.700 | 2910.94 | 707.90 | 707.86 | -7.75 | 1.56 | |
| 3103.00 | 18.500 | 1.800 | 2995.51 | 735.61 | 735.58 | -7.38 | 1.08 | |
| 3192.00 | 19.900 | 359.000 | 3079.56 | 764.87 | 764.84 | -7.20 | 1.88 | |
| 3282.00 | 21.000 | 357.600 | 3163.89 | 796.31 | 796.27 | -8.14 | 1.34 | |
| 3372.00 | 20.600 | 359.000 | 3248.02 | 828.26 | 828.21 | -9.09 | 0.71 | |
| 3459.00 | 18.500 | 355.500 | 3330.01 | 857.34 | 857.28 | -10.44 | 2.76 | |
| 3549.00 | 17.800 | 0.400 | 3415.53 | 885.34 | 885.27 | -11.47 | 1.87 | |
| 3640.00 | 19.000 | 359.000 | 3501.88 | 914.06 | 913.99 | -11.63 | 1.41 | |
| 3728.00 | 18.500 | 0.100 | 3585.21 | 942.35 | 942.27 | -11.86 | 0.70 | |
| 3818.00 | 18.600 | 359.400 | 3670.53 | 970.98 | 970.90 | -11.98 | 0.27 | |
| 3908.00 | 17.300 | 1.100 | 3756.15 | 998.71 | 998.64 | -11.87 | 1.56 | |



Actual Wellpath Report

HOWARD 24-29 AWP

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | KERR MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#03 HOWARD 24-29 (1099'FSL & 1314'FEL) |
| Area | COLORADO | Well | HOWARD 24-29 |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | HOWARD 24-29 AWB |
| Facility | SEC.29-T1N-R67W | | |

WELLPATH DATA (88 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|---------------------|
| 3999.00 | 17.800 | 352.700 | 3842.93 | 1026.05 | 1025.97 | -13.38 | 2.83 | |
| 4087.00 | 18.600 | 354.100 | 3926.53 | 1053.38 | 1053.27 | -16.53 | 1.04 | |
| 4177.00 | 16.000 | 1.100 | 4012.46 | 1080.08 | 1079.96 | -17.77 | 3.70 | |
| 4266.00 | 13.800 | 6.000 | 4098.46 | 1102.89 | 1102.78 | -16.43 | 2.85 | |
| 4356.00 | 12.800 | 5.700 | 4186.05 | 1123.46 | 1123.38 | -14.31 | 1.11 | |
| 4443.00 | 14.900 | 359.000 | 4270.52 | 1144.23 | 1144.15 | -13.55 | 3.03 | |
| 4532.00 | 15.600 | 356.900 | 4356.38 | 1167.63 | 1167.54 | -14.40 | 1.00 | |
| 4620.00 | 17.000 | 359.000 | 4440.85 | 1192.32 | 1192.22 | -15.26 | 1.73 | |
| 4710.00 | 17.800 | 1.800 | 4526.73 | 1219.22 | 1219.13 | -15.06 | 1.29 | |
| 4800.00 | 17.000 | 358.300 | 4612.61 | 1246.12 | 1246.03 | -15.02 | 1.46 | |
| 4891.00 | 18.800 | 359.000 | 4699.20 | 1274.08 | 1273.99 | -15.67 | 1.99 | |
| 4980.00 | 19.600 | 359.000 | 4783.25 | 1303.35 | 1303.25 | -16.18 | 0.90 | |
| 5070.00 | 17.500 | 358.300 | 4868.57 | 1331.98 | 1331.88 | -16.85 | 2.35 | |
| 5157.00 | 17.600 | 0.800 | 4951.52 | 1358.21 | 1358.10 | -17.05 | 0.87 | |
| 5245.00 | 16.500 | 7.400 | 5035.66 | 1383.88 | 1383.80 | -15.25 | 2.53 | |
| 5334.00 | 12.900 | 8.500 | 5121.74 | 1406.22 | 1406.17 | -12.16 | 4.06 | |
| 5421.00 | 10.600 | 8.500 | 5206.91 | 1423.71 | 1423.69 | -9.54 | 2.64 | |
| 5511.00 | 8.100 | 11.300 | 5295.70 | 1438.09 | 1438.10 | -7.07 | 2.82 | |
| 5599.00 | 6.700 | 1.800 | 5382.97 | 1449.29 | 1449.31 | -5.70 | 2.11 | |
| 5689.00 | 5.400 | 0.800 | 5472.47 | 1458.77 | 1458.79 | -5.47 | 1.45 | |
| 5777.00 | 4.200 | 359.000 | 5560.16 | 1466.13 | 1466.15 | -5.47 | 1.37 | |
| 5867.00 | 3.500 | 352.700 | 5649.96 | 1472.16 | 1472.17 | -5.88 | 0.91 | |
| 5955.00 | 3.900 | 335.800 | 5737.77 | 1477.57 | 1477.57 | -7.45 | 1.31 | |
| 6043.00 | 1.600 | 327.000 | 5825.67 | 1481.35 | 1481.33 | -9.34 | 2.65 | |
| 6175.00 | 1.600 | 302.100 | 5957.62 | 1483.90 | 1483.85 | -11.91 | 0.52 | |
| 6310.00 | 1.200 | 310.800 | 6092.58 | 1485.85 | 1485.78 | -14.57 | 0.33 | |
| 6443.00 | 1.100 | 303.800 | 6225.55 | 1487.49 | 1487.40 | -16.69 | 0.13 | |
| 6577.00 | 1.100 | 309.100 | 6359.53 | 1489.04 | 1488.92 | -18.75 | 0.08 | |
| 6711.00 | 1.600 | 311.200 | 6493.49 | 1491.11 | 1490.97 | -21.16 | 0.37 | |
| 6845.00 | 1.300 | 310.100 | 6627.45 | 1493.34 | 1493.18 | -23.73 | 0.22 | |
| 6981.00 | 1.100 | 31.700 | 6763.42 | 1495.45 | 1495.28 | -24.23 | 1.16 | |
| 7113.00 | 1.000 | 35.200 | 6895.40 | 1497.46 | 1497.30 | -22.90 | 0.09 | |
| 7247.00 | 0.700 | 39.800 | 7029.39 | 1499.03 | 1498.89 | -21.70 | 0.23 | |
| 7382.00 | 0.700 | 39.400 | 7164.38 | 1500.29 | 1500.16 | -20.65 | 0.00 | |
| 7417.00 | 1.100 | 31.000 | 7199.37 | 1500.74 | 1500.61 | -20.34 | 1.20 | |
| 7547.00 | 1.300 | 57.400 | 7329.35 | 1502.59 | 1502.47 | -18.45 | 0.45 | |
| 7782.00 | 1.600 | 359.400 | 7564.28 | 1507.28 | 1507.19 | -16.24 | 0.61 | |
| 7917.00 | 1.600 | 5.700 | 7699.23 | 1511.04 | 1510.95 | -16.07 | 0.13 | |
| 8051.00 | 1.500 | 14.500 | 7833.18 | 1514.59 | 1514.51 | -15.45 | 0.19 | |
| 8183.00 | 1.100 | 27.500 | 7965.15 | 1517.38 | 1517.31 | -14.43 | 0.37 | |
| 8316.00 | 0.800 | 20.800 | 8098.13 | 1519.37 | 1519.31 | -13.51 | 0.24 | |
| 8482.00 | 1.300 | 33.500 | 8264.10 | 1522.01 | 1521.96 | -12.06 | 0.33 | LAST BHI MWD SURVEY |
| 8532.00 | 1.300 | 33.500 | 8314.09 | 1522.95 | 1522.91 | -11.43 | 0.00 | PROJECTION TO BIT |



Actual Wellpath Report

HOWARD 24-29 AWP

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | KERR MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#03 HOWARD 24-29 (1099'FSL & 1314'FEL) |
| Area | COLORADO | Well | HOWARD 24-29 |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | HOWARD 24-29 AWB |
| Facility | SEC.29-T1N-R67W | | |

HOLE & CASING SECTIONS - Ref Wellbore: HOWARD 24-29 AWB Ref Wellpath: HOWARD 24-29 AWP

| String/Diameter | Start MD [ft] | End MD [ft] | Interval [ft] | Start TVD [ft] | End TVD [ft] | Start N/S [ft] | Start E/W [ft] | End N/S [ft] | End E/W [ft] |
|------------------------|---------------|-------------|---------------|----------------|--------------|----------------|----------------|--------------|--------------|
| 12.25in Open Hole | 15.00 | 1209.00 | 1194.00 | 15.00 | 1195.72 | 0.00 | 0.00 | 155.24 | -2.08 |
| 8.625in Casing Surface | 15.00 | 1209.00 | 1194.00 | 15.00 | 1195.72 | 0.00 | 0.00 | 155.24 | -2.08 |
| 7.875in Open Hole | 1209.00 | 8532.00 | 7323.00 | 1195.72 | 8314.09 | 155.24 | -2.08 | 1522.91 | -11.43 |

TARGETS

| Name | MD [ft] | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
|---|---------|----------|------------|-----------|-------------------|--------------------|----------------|-----------------|--------|
| HOWARD 24-29 GEO TARGET 50' RADIUS (2580'FSL & 1320'FEL, REV-1) | | 6000.00 | 1481.54 | -15.17 | 3165339.04 | 1251381.40 | 40°01'18.905"N | 104°54'34.679"W | circle |
| HOWARD 24-29 HARDLINE 55'N OF GEO TARGET | | 6000.00 | 1536.52 | -15.16 | 3165338.69 | 1251436.38 | 40°01'19.448"N | 104°54'34.679"W | point |

WELLPATH COMPOSITION - Ref Wellbore: HOWARD 24-29 AWB Ref Wellpath: HOWARD 24-29 AWP

| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore |
|---------------|-------------|------------------------------|---------------------------|------------------|
| 15.00 | 8482.00 | NaviTrak (Standard) | BHI MWD SURVEY <155-8482> | HOWARD 24-29 AWB |
| 8482.00 | 8532.00 | Blind Drilling (std) | Projection to bit | HOWARD 24-29 AWB |